



Translation of Abstract of French Patent Application 1.378.894

The present invention comprises notably:

1. In a vehicular suspension comprising a group of central wheels that support a large fraction of the total weight, the group of central wheels framed by two groups of outer wheels affected principally by the direction of the vehicle, the fact that the central group of wheels are mounted by methods such as to allow them a limited displacement such that a steering lock on both sides of their symmetrical, middle position in relation to the longitudinal axis of the vehicle, these arrangements having for effect, notably in rapid turning, to protect said wheels in the central group from the majority of transverse reactions of adherence that must create equilibrium to transverse solicitations, notably centrifugal, in such a way that the outer wheels, unburdened in great part of the corresponding transverse constraints, are all the same to guarantee in the best conditions the functions of the directional wheels as long as the limit of adherence of the central wheels is not surpassed;
2. In a suspension in the genre specified under No. 1 or in a similar situation, the fact that the central wheels' limited steering lock is realized by method of a submission of which the sensor mechanism is tied to the difference in transverse reactions soliciting respectively no less than one wheel of each of the groups of outer wheels, in such a way that the submission does not have to be solicited by the transversing efforts of the opposing directions that are normally applied to said outer wheels in their function as directional wheels;
3. In a suspension in the genre specified under No. 1 or in a similar situation, the fact that the central wheels' limited steering lock is realized by method of a submission of which the sensor mechanism is constituted by a transversal accelerometer that establishes a relation between the centrifugal actions soliciting the vehicle and the angle of the steering lock of the central wheel group;
4. In a suspension in the genre specified under No. 3 or in a similar situation, the fact that the detecting mass of the accelerometer detecting of the submission of steering lock of the central wheels, is coupled with the hydraulic distributor ring by an amount of screw nuts geared with a solitary helicoid pinion of the aforementioned ring of which the angular position around the axis of distribution is controlled by the exterior in this example of the method by a pinion of a spur gear entering a indented section of said ring, which permits one to easily introduce a relation between the efforts applied to the detecting mass by a transverse acceleration and the angle of the steering lock corresponding to central wheels;
5. In a suspension in the genre specified under No. 3 or in a similar situation, the fact that one can interdependently make from the detecting mass and the ring of distribution of said accelerometer a screw nut and a set screw, or vice versa, and guarantee the relative rotation of either of the elements, distribution ring or detecting mass;
6. In a suspension in the genre specified under No. 1 or in a similar situation, the fact that the external spare tire carriers involved in the detecting mechanism in controlling wheels in the central group incorporating a weak degree of transversal freedom controlled in this instance by means of pre-stressed springs of which variations of shaft, in use, are used to drive the control;
7. In a suspension of the genre specified under No. 1 or in a similar situation, the fact that in the case of a submission by a jack, the detection mechanism of work cooperates with a multi-track distributor or the equivalent, admitting or evacuating liquid under pressure in a double-action jack;
8. In a suspension of the genre specified under No. 1 or in a similar situation, the fact that in a case of failure of the hydraulic submission for any cause, the central group of wheels

are brought back to their symmetrical position by an assistance device (preferably mechanical);

9. In a suspension of the genre specified under No. 8 or in a similar situation, the fact that the assistance device has a connection twice that of the initial tension;
10. In a suspension of the genre specified under No. 2 or No. 9, or in a similar situation, the fact that the reactive action of the submission acts conversely to the detecting mechanism to stop the steering lock when a predetermined bearing of variable need exists between the steering lock angle of the central wheels and the amplitude of the solicitation of the detecting device;
11. In a suspension of the genre specified under No. 1 or in a similar situation, the fact that the central wheels contain mechanisms for spare wheel carriers of which the sensibly vertical rotation axis that controls their steering lock is found hidden in front of the wheel axis wheel in comparison with the forward movement of the vehicle in such a manner that when the central wheels undergo to a partial breaking, the distance from the wheel layout to the chassis varying substantially in the direction that brings the interior wheel closer to the chassis and keeps the exterior wheel farther away while turning, for each pair of wheels, concurrent, from this fact, for the transversal stability in turning by reducing most of what can create an overburden of the exterior wheels in turning as compared with the unburdening of the symmetrical wheels placed, consequently, inside for turning;
12. In a suspension of the genre specified under No. 1 or in a similar situation, the fact that in a vehicle with more than four diagonal wheels, one employs twin pivoting wheels on the level of the outer wheels and from wheels framing the same spare wheel carrier arm as in the group of central wheels.